Bruhat Bangalore Mahanagara Palike

Name of Work :Improvement and Construction of Compound wall, Sump Tank and electric work in Govt primary,and High School Yelahanka B Sector in ward no-05 Yelahanka New Town Sub Division

Estimate Cost 2500000.00

Sl No	Description of Item	Mesurement					Qty	Rate	Amount
		Unit	No	L	B	D			
1	Dismantling roofing including ridges, hips, valleys and gutters etc., and stacking the material to the appropriate disposal area as per direction of Engineer-in-charge. (PWD SR 2021-22 Vol -2 Pg 165 item no								
	Asbestos cement sheet	Sqm	1	4.35	2.8		12.18		
	Basic rate							388	
	Area weightage 10%							38.8	
	Total						**12.18**	**426.80**	**5198.42**
2	Dismantling doors, windows and clerestory windows (steel or wood) shutter including chowkhats, architrave, holdfasts etc. complete and stacking to the appropriate disposal area as per direction of Engineerin-charge.(PWD SR 2021-22 Vol -2,Pg 164 Item No.19.12.2)								
	Doors	Sqm	1	1.1	2.1		2.31		
	Ventilater	Sqm	2	0.45	0.45		0.405		
	Basic rate							184	
	Area weightage 10%							18.4	
	Total						**2.72**	**202.40**	**549.52**
3	Demolishing brick work manually/ by mechanical means including stacking of serviceable material and disposal of unserviceable material to the appropriate disposal area as per direction of Engineer-in-charge.(PWD SR 2021-22 Vol -2 Pg 163 item No. 19.7.3)								
	Existing Building	Sqm	1	4.35		2.35	10.2225		
	Deduction								
	Door	Sqm	-1	1.1		2.10	-2.31		
	Ventilater	Sqm	-2	0.45		0.45	-0.405		
	Basic rate							789.00	
	Area weightage 10%							78.9	
	Total						**7.51**	**867.90**	**6515.76**
4	Demolishing cement concrete manually/ by mechanical means including disposal of material to the appropriate disposal area as per direction of Engineer-in-charge (PWD SR 2021-22 Vol -2 Pg 163 Item no								
	FLOOR						45.80		
	Staff Room	Sqm	1	5.60	8.18		46.626		
	HM room	Sqm	1	5.60	8.18		46.626		
	Computer Class Room	Sqm	1	5.60	8.18		46.626		
	Basic rate							1274	
	Area weightage 10%						137.42	127.4	192585.99
	Total						**139.88**	**1401.40**	**196025.03**
5	Dismantling steel work manually/ by mechanical means in built up sections without dismembering and stacking to the appropriate disposal area as per direction of Engineer-in-charge.(PWD SR 2021-22 Vol -2 Pg 165 Item no 19.19)								
	Gate	kg	1	5.60		2.53	425.04		
	Basic rate							2.00	
	Area weightage 10%							0.2	

	Total	**30**					**425.04**	**2.20**	**935.09**
6	Earth work excavation by manual means for drains,canals, waste weir, draft, approach channels, key trenches, foundation of bridges and such simillar works in all kinds of soils , as per drawing and technical specifications, including setting out, shoring, strutting, barricading, caution lights, removal of stumps and other deleterious matter, excavated surface leveled and sides neatly dressed disposing off the excavated stuff or sorting & stacking the selected stuff for reuse in a radius of 50 m and lift upto 1.5 m including cost of labour, tools & other appurtenaces required to complete the work. (PWD SR 2021-22 Vol -I Pg No 5 item								
	New Drain	Cum							
			1	14.00	0.90	0.60	7.56		
	Sump	Cum	1	3.3	3.3	2.0	21.78		
	compound wall								
			1	5.70	0.90	0.60	3.08		
	culvert								
			1	4.50	1.10	0.90	4.46		
	Basic rate							199.00	
	Area weightage 10%							19.9	
	Total						**36.87**	**218.9**	**8071.50**
7	KSRB 2.8 : Providing and Filling in foundation with granite / trap broken metal 100mm. and down size, with approved sand including hand packing, ramming, watering, including cost of all materials and labour with all lead and lift, complete as per specifications, specification. No. KBS 2.10.2 (PWD SR 2018-19/ Pg No-7/ I no. 2.15)								
	Sump	Cum	1.00	4.50	1.10	0.10	0.495		
	Footing	Cum	2.00	1.10	1.10	0.10	0.242		
	Basic rate							2561.00	
	Area weightage 10%							256.10	
	Total						**0.74**	**2817.10**	**2076.20**
8	Providing and laying in position plain cement concrete Mix 1:3:6 (M10) for levelling course for all works in foundation. Using 40 mm nominal size graded crushed coarse aggregates and fine aggregates as per relevant IS Codes machine mixed, laid in layers not exceeding 150 mm thickness, well compacted using plate vibrators, including all lead & lifts, cost of all materials of quality, labour, Usage charges of machineries, curing, and all the other appurtenances required to complete the work as per technical specifications. (PWD SR 2021-22 Vol -I Pg 15 item no 2.1.3)								
	For Drain								
		Cum	1	14.00	0.90	0.15	1.89		
	For compound								
		Cum	1	5.70	0.90	0.15	0.77		
	For Culvert								
		Cum	1	4.50	1.10	0.15	0.74		
	Sump	Cum	1	3.3	3.3	0.15	1.63		
	Footing	Cum	2.00	1.10	1.10	0.15	0.36		
	Basic rate							5752.00	
	Area weightage 10%							575.20	
	Total						**5.40**	**6327.20**	**34157.39**
9	Providing and laying in position Reinforced cement concrete for all Sub structures of building, Irrigation works, Sub structure works of bridges, Drain works & other parallel works from 0.50m to 3.50 m height. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticisers, laid in layers, well compacted using needle vibrators, providing weep holes wherever necesary, including all lead & lifts, cost of all materials of quality, confirming to the requirements of relevant IS codes, labour, Usage charges of machinery, curing and all other appurtenances required to complete the work as per technical specifications. M20 (The cost of steel reinforcement & formwork to be paid separately) (PWD SR 2021-22 Vol -I Pg 17 item no 2.4.2)								

For sump									
Bottom slab	Cum	1	3.30	3.30	0.20	2.18			
Sump walls	Cum	2	3.30	0.20	1.50	1.98			
	Cum	2	3.00	0.20	1.50	1.80			
Cover slab	Cum	1	3.00	3.30	0.20	1.98			
Deduction									
Opening	Cum	-1	1.00	1.00	0.20	-0.20			
For Footing									
Footing	Cum	2.00	1.10	1.10	0.30	0.73			
Column	Cum	2.00	0.20	0.20	0.30	0.02			
						Sub Total	**8.49**		
SSM									
		1	4.50	0.90	0.15	0.61			
						Sub Total	**0.61**		
Bottom Raft	Cum								
		1	14.00	0.90	0.15	1.89			
Side Wall									
		2	4.50	0.15	0.90	1.22			
						Sub Total	**3.11**		
Culvert									
Bottom Raft									
	Cum	1	4.50	1.10	0.20	0.99			
Bottom Raft									
	Cum	2	4.50	0.25	0.60	1.35			
						Sub Total	**2.34**		
Basic rate							6256.00		
Add 8% for Shuttering							500.48		
							6756.48		
Area weightage 10%							675.65		
Total						**14.54**	**7432.13**	**108066.86**
10	Providing and laying in position Reinforced cement concrete for all Super structures of building , Road works, Water works, Irrigation works & super structure works of bridges upto 3.50 m height. The granite/ trap/ basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticisers laid in layers, well compacted using needle vibrators. The cost includes all lead & lifts, cost of all materials, quality confirming to the requirements of relevant IS codes , labour, Usage charges of machinery, curing and all other appurtenances required to complete the work as per technical specifications. (The cost of steel reinforcement, dowel bars & formwork to be paid separately) M25 Design Mix Using 20 mm nominal size graded crushed coarse aggregates (Vol 2/ P No-17/ I no- 2.5.2 of PWD SR								
Column above Ground Level	Cum	2.00	0.20	0.20	2.10	0.17			
Basic rate							6186.00		
Add 10% For Shuttering							618.60		
Sub Total							6804.60		
Area weightage 10%							680.46		
Total						**0.17**	**7485.06**	**1257.49**	

11	Supplying, Fitting and Placing TMT Fe550 bar Reinforcement in sub-structure complete as per Drawing and Technical Specifications. MORTH Specification NO.1600&2200 (PWD SR 2021-22 Vol -III Pg 99 item no 13.1)								
	Sump	Cum					7.74		
		kg	Steel assumed 130 Kg/Cum of				1005.94		
	Footing	Cum					0.73		
		Kg	Steel assumed 100 Kg/Cum of				72.60		
	Column	Cum					0.19		
		Kg	Steel assumed 200 Kg/Cum of				38.40		
	For Drain	Cum					3.11		
		kg	Steel assumed 60Kg/Cum of				186.30		
		tonne					**0.19**		
	For Culvert	Cum					2.34		
		kg	Steel assumed 90 Kg/Cum of				210.60		
		tonne					**0.21**		
	Basic rate							96.00	
	Area weightage 10%							9.60	
	Total						**1513.84**	**105.60**	**159861.50**
12	Providing and Fixing pre cast covering Slab 100mm thick made out of CC . Jelly 20mm Down Size with steel reinforcement including form work, curing, including cost of all materials, labour, hire charges of machinery, loading, unloading, lead and lift, transportation etc. complete as per Engineer incharge. (Data								
	For drain	Sqm	1.00	14.00	0.90		12.60		
	Data rate							2072.00	
	Area weightage 10%							207.20	
	Total						**12.60**	**2279.20**	**28717.92**
13	Providing and Fixing pre cast covering Slab 230mm thick made out of CC . Jelly 20mm Down Size with steel reinforcement including form work, curing, including cost of all materials, labour, hire charges of machinery, loading, unloading, lead and lift, transportation etc. complete as per Engineer incharge. (Data								
	Culvert cover Slab								
		Sqm	1	4.50	1.10		4.95		
	Basic rate							**5037.00**	
	Area weightage 10%							503.70	
	Total						**4.95**	**5540.70**	**27426.47**
14	Providing and laying in position Reinforced cement concrete for all Sub structures of building, Irrigation works, Sub structure works of bridges, Drain works & other parallel works from 0.50m to 3.50 m height. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticisers, laid in layers, well compacted using needle vibrators, providing weep holes wherever necesary, including all lead & lifts, cost of all materials of quality, confirming to the requirements of relevant IS codes, labour, Usage charges of machinery, curing and all other appurtenances required to complete the work as per technical specifications. (The cost of steel reinforcement & formwork to be paidseparately) Mix 1:2:4 (M15) Using 20 mm nominal size graded crushed coarse aggregates (PWD SR 21-22 Vol I Pg no 17 Item No 2.4.1)								
	For Entrance								
		Cum	1	13.40	15.50	0.10	20.77		
	Basic rate							204.00	
	Area weightage 10%							20.40	
	Total						**20.77**	**224.40**	**4660.79**

15	Earth work in surface excavation by mechanical means for lowering & leveling the ground for all works other than foundation in all kinds of soils & upto depth not exceeding 300mm as per drawing and technical specifications, including setting out, shoring, strutting, barricading, caution lights, removal of stumps and other deleterious matter including dressing of excavated surfaces, disposing off or levelling the excavated earth or sorting & stacking the selected earth for reuse in a radius of 50 m and lift upto 1.5 m including cost of labour, tools, usage of machinery & other appurtenances required to complete the work. In all kinds of soils upto 300 mm depth. (PWD SR 21-22 Vol I Pg no 8 Item No 1.12)								
	Cubble stone for Entrance	Cum	1.00	13.40	15.50	0.30	62.31		
	Basic rate							65.00	
	Area weightage 10%							6.50	
	Total						**62.31**	**71.50**	**4455.17**
16	Construction of Embankment by excavating the available approved Gravel/Murrum deposited at a place or borrow pits during or prior excavation with all lifts and lead, transportation to site, spreading,grading to required slope and compacting to meet the requirement complete as per specifications, including cost of labour,rolling,water,all materials,usage& all other appurtenaces required to complete the work. (PWD SR 21-22 Vol I Pg no 7 Item No 1.8)								
	Cubble stone for entrance	Cum	1.00	13.40	15.50	0.10	20.77		
	Basic rate							402.00	
	Area weightage 10%							40.20	
	Total						**20.77**	**442.20**	**9184.49**
17	Providing and laying in position plain cement concrete for levelling course for all works in foundation. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed, laid in layers not exceeding 150 mm thickness, well compacted using plate vibrators, including all lead & lifts, cost of all materials of quality, labour, Usage charges of machineries, curing, and all the other appurtenances required to complete the work as per technical specifications. (The cost of steel reinforcement & formwork shall be paid separately) Mix 1:5:10 Using 40 mm nominal size graded crushed coarse aggregates (PWD SR 21-22 Vol-I Pg no 15 Item No 2.11)								
	Cubble stone for entrance								
		Cum	1.00	13.40	15.50	0.15	31.16		
	Basic rate							4976.00	
	Area weightage 10%							497.60	
	Total						**31.16**	**5473.60**	**170530.01**
18	Providing and constructing un-reinforced plain cement concrete pavement, thickness as per design, over a prepared sub base, with 43 grade cement or any other type as per Clause 1501.2.2 M30 (Grade), coarse and fine aggregates conforming to IS:383, maximum size of coarse aggregate not exceeding 25 mm, mixed in a concrete mixer of not less than 0.2 cum capacity and appropriate weigh batcher using approved mix design, laid in approved fixed side formwork (steel channel, laying and fixing of 125 micron thick polythene film, wedges, steel plates including levelling the formwork as per drawing), spreading the concrete with shovels, rakes, compacted using needle, screed and plate vibrators and finished in continuous operation including construction joints, , primer, sealant , curing of concrete slabs for 14- days, and water finishing to lines and grade as per drawing and technical specification clause 1501 with all lead, lifts, loading & unloading charges, cost and conveyance of all materials, labour, equipments etc., complete, as per the directions of the Engineer-in-charge of the work. (PWD SR 21-22 Vol III Pg no 138 Item No 20.29)								
	Cobble Stone For Entrance	Cum	1	13.40	15.50	0.10	20.77		
	Basic rate							6837.00	
	Area weightage 10%							683.70	
	Total						**20.77**	**7520.70**	**156204.94**

19	Providing and laying heavy duty cobble stones 60mm thick interlock pavers, using cement and course sand for manufacture of blocks of approved size, shape and colour with a minimum compressive strength of 281 kg per m2 over 50mm thick sand bed (average thickness) and compacting with plate vibrator having 3 tons compaction force thereby forcing part of sand underneath to come up in between joints, final compaction of paver surface joints into its final level , including cost of materials, labour and Usage charges of machinery complete as per specifications. (PWD SR 2021-22 Vol II Pg no 64 Item No 9.31)								
	Cobble Stone For Entrance	Sqm	1	13.40	15.50		207.70		
	Basic rate							1087.00	
	Area weightage 10%							108.70	
	Total						**207.70**	**1195.70**	**248346.89**
20	Providing and laying heavy duty cobble stones 75mm thick interlock pavers, using cement and course sand for manufacture of blocks of approved size, shape and colour with a minimum compressive strength of 281 kg per m2 over 50mm thick sand bed (average thickness) and compacting with plate vibrator having 3 tons compaction force thereby forcing part of sand underneath to come up in between joints, final compaction of paver surface joints into its final level, including cost of materials, labour and Usage charges of machinery complete as per specifications. (PWD SR 2021-22 Vol II Pg no 64 Item No 9.32)								
	Cobble Stone For Entrance	Sqm	1	13.40	15.50		207.70		
	Basic rate							1145.00	
	Area weightage 10%							114.50	
	Total						**207.70**	**1259.50**	**261598.15**
21	Loading and Unloading of Stone Boulder/Stone aggregates/ Sand/Kankar/Moorum. (Tipper 5.5 m3) (PWD SR 2021-22 Vol-III Page No.3, Item No.1.1A)								
	Excavated Earth	Cum					461.91		
	Filling Available of Excavated Earth						-20.77-		
								118.00	
	Basic rate						461.91	11.80	59255
	Area weightage 10%						**482.68**	**129.80**	**62652.25**
	Total								
22	Cost of Haulage Excluding Loading and Unloading Taking output 10 t load and lead 10 km = 100 t.km (PWD SR 2021-22 Vol-III Page No.3, Item No.1.4A)								
		.Km		482.68		1.280	617.834		
								12.00	
	Basic rate							96.00	
	8Km 12*8							9.60	
	Area weightage 10%						**617.83**	**105.60**	**65243.30**
	Total								
23	Fabricating, providing and erecting in position Hot dip galvanised Gate. Using 72 X 72 X 4.8mm Sq. GI Pipe Frame with Top pipe bending in heavy duty hydraulic press with sand packing and hot bending to form double arch as per drawing profile, 20mm hot dip galvanised sq. rod for verticals at 150mm c/c, as shown in the drawing including providing hot dip galvanised forged ornamental design in between sq. rods and heads at top, middle and bottom. Intermediate supports of 75X12 mm and 50X6 mm arch bend to hot dip galvanised flats. The work is inclusive of throughing GI flat GI sq. rods, placing, welding all the joints including grinding, finishing metal putty, painting two coats enamel painting. The rate is inclusive of all materials like GI sq. pipe. GI sq. rods, GI forged designs etc., heavy duty hinges are made out of 75mm solid sq. block assembled with 20mm dia bearing in three places for each flop. Heavy Duty Locking arrangements at tow places including cost of labour, painting, erecting charges using hoist pulley cranes with all lead and lift, loading, transportation, unloading, scaffolding charges and all other incidental charges for successful completion of the work as per directions of the Engineer-in-charge of the work. (Data Rate)								
	For Gate,	Sqm	1	5.60		2.53	14.17		
	Data Rate							12475.00	
	Total						**14.17**	**12475.00**	**176745.80**

24	Providing and placing on terrace(at all floor levels). polyethylene water storage tanks as per IS 12701 marked,with cover and suitable locking arrangement and making necessary holes for inlet,outlet and overflow pipes but without fittings and the base support for tank(For 1000 litre capacity) (PWD SR 2021-22 1st Corrigenda Vol II.SI No.12.Item No 13.34).								
	Sintex						2000.00		
	Primary school	ltr	2000				1000.00		
	High school	ltr	1000					8.00	
	Basic rate							0.80	
	Area weightage 10%						**3000.00**	**8.80**	**26400.00**
	Total								
24	Providing and fixing M.S. grills of required pattern in frames of windows etc. with M.S. flats. square or round bars etc. including priming coat with approved steel primer all complete. Fixed to steel windows by welding. (PWD SR 2021-22 Vol -II Pg 85 item no 11.34A)								
	Grills						179.357		
	Near stair case (with door)	kg	3.14*2.72*21=179.3568						
							175.93		
	Near girls toilet (with door)	kg	3.08*2.72*21=175.9296						
							74.676		
	Near boys toilet(with door)	kg	1.27*2.12*21=74.676						
							86.436		
	Near class room	kg	1.47*2.8*21=86.436						
							103.488		
	First floor(primary school)	kg	3.08*1.6**21=103.488						
							116.235		
	primary school grill door	kg	0.9*2.05*3*21=116.235						
							152.145		
	High school grill door	kg	1.15*2.1*21*3=152.145						
	high school grill on first floor						65.1		
	shorter direction	kg	1.55*2*21=65.1						
							212.94		
	longer direction	kg	5.07*2*21=212.94						
								131.00	
	Basic rate							13.10	
	Area weightage 10%						**1166.31**	**144.10**	**168064.75**
	Total								
25	Providing and laying Cement concrete flooring 40 mm thick with 20mm nominal size stone aggregate using 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate) finished with a floating coat of neat cement. including cement slurry complete.(PWD SR 2021-22 Vol -II Pg 59 item no 9.1)								
	Concrete flooring	Sqm	1	8.00	2.42		19.36		
	Basic rate							400.00	
	Area weightage 10%							40	
	Total						**19.36**	**440**	**8518.40**

26	Providing and laying in position Reinforced cement concrete for all Sub structures of building, Irrigation works, Sub structure works of bridges, Drain works & other parallel works from 0.50m to 3.50 m height. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticisers, laid in layers, well compacted using needle vibrators, providing weep holes wherever necesary, including all lead & lifts, cost of all materials of quality, confirming to the requirements of relevant IS codes, labour, Usage charges of machinery, curing and all other appurtenances required to complete the work as per technical specifications. (The cost of steel reinforcement & formwork to be paid separately) Mix 1:2:4 (M15) Using 20 mm nominal size graded crushed coarse aggregates(PWD SR 2021-22 Vol -I Pg 17 item no 2.4.1)								
	Concrete flooring	Cum	1	8.00	2.42	0.1	1.94		
	Basic rate							5880.00	
	Area weightage 10%							588	
	Total						**1.94**	**6468**	**12522.05**
26	Supply and delivery of Centrifugal pumpset at site brand new best make and with discharge duty confirming to ISI standards and its latest amendments2 HP, Size 50x40 Head 22M, Discharge 186 LPM (PWD SR 2021-22 Vol -V Pg 164 item no 46.2)								
	motor	Each	2.00				2		
	Basic rate							17470.00	
	Total						**2.00**	**17470**	**34940.00**
27	GREEN SOUL Seuol-X Mid Back Ergonomic Chair (Home Office, WFH Moulded Foam Extra Comfort Faabric Office Executive Chair Data Rate complete as per specifications.Specification and directoin of site engineer in incharge								
	High school								
	Chairs	Nos	6				6		
	Primary school								
	Chairs	Nos	5				5		
	Basic rate							**3880**	
	Total						**11.00**	**3880**	**42680.00**
28	Supplying steel Almirah with shelves & locker 6.6feet 18/20 gaugeof size 78" x 36"x 19" etc. including of all taxes as per approved by engineer in charge (Data rate) complete as per specifications.Specification .and directoin of site engineer in incharge								
	High school								
		Nos	3				3		
	Primary school								
		Nos	4				4		
	Basic rate							**12022.5**	
	Total						**7.00**	**12022.5**	**84157.50**
29	Supplying of .....feet -PVC Batten with integrated LED tube .... W with high quality diffuser with Life of 25000 burning hours & 70% lumen maintenance with CRI > 80. Power Input: 220-240V@ 50/60Hz & Power factor >0.9 along with CE approved. 2 years Warranty against any manufacturing defect working under standard electrical condition.LED light fitting 1 x 2' - 9/10 W								
	Staff Room	Each	4				4		
	HM Room	Each	3				3		
	Class Rooms	Each	10				10		
	Basic rate							**496**	
	Total						**17.00**	**496**	**8432.00**

	TOTAL AMOUNT	2118447.69
	GST Charges (18% of estimated cost)	381320.6
	Miscellenious	231.7
	Grand Total	2500000.00

CERTIFICATE:

1) The work spot has been inspected and found to be necessary

2) The work spot comes under B.B.M.P

3) The provisions made in the estimate are necessary and minimum.

4) The estimate is based on S.R of 2021-2022, PWD Electrical 2021-22 and approved rates.

Administrative Approval
Accorded For Rs. 25.00 Lakhs
Head of A/C...8:3796
CER NO :...82..... Dt: 22/8/22

Technical Sanction
Accorded For Rs. 25.00 Lakh
Head of A/C...8:3796
CER NO :...87..... Dt: 22/8/22

Assistant Engineer
BBMP

Assistant Executive Engineer
BBMP

Executive Engineer
BBMP